Notice of Allowability	Application No.	Applicant(s)
	09/838,532	BABAIAN ET AL.
	Examiner	Art Unit
	CHAMELI C. DAS	2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the amendment filed on 5/17/04*.

2. ☒ The allowed claim(s) is/are *28-35 (the newly numbered claims are 1-8)*.

3. ☒ The drawings filed on *4/18/01* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None   of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____ .

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)

2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *7/17/04* .

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

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1.   This action is in response to the amendment filed on 5/17/04.

2.   Claims 1-27 have been canceled.

3.   Claims 28-35 have been allowed.

EXAMINER'S AMENDMENT

4.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with

Mr. Horace H. Ng, applicant's attorney on 7/1/04 and 7/16/04.

The application has been amended as follows:

(a)   **In the specification**, in page 1, line 15, the blank space should be replaced by the

--09/838,552 --, in page 1, line 17, the blank place should be replaced by -- 09/838,530 --,

and in page 1, line 19, the blank place should be replaced by -- 09/838,550 --.

(b**) In the claims:**

(1)   Claims 24-27 have been canceled.

(2)   Claim 31, lines 4-5,

  "wherein accesses to the non-volatile database from the foreign binary code are
  analyzed by the binary translation system;"

have been replaced by

-- wherein accesses from the foreign binary code to a storage device storing the
non-volatile database are analyzed by the binary translation system;--

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(3)   Claim 31, lines 10-11,

"wherein overall capacity and related parameters of the non-volatile database attributed to the foreign binary code are corrected to account for loss of space in the same way"

have been replaced by

--wherein overall capacity and related parameters of the storage device communicated to the foreign binary code are corrected to account for resulting loss of usable space on the storage device; --

(4)   In claim 32, line 23, "should" has been replaced by --if -- and in line 24, "arise"

has been replaced by --arises--

(5)   In claim 32, line 27, "should an association be" has been replaced by

-- if an association is --.

(6)   In claim 32, line 30, "should a sequence be" has been replaced by

--if a sequence is--.

(7)   In claim 33, line 1, "claim 32" has been replaced by --claim 29--.

(8)   In claim 33, lines 3-4,

"store an image of the foreign binary code translated into optimized translated binary code sequences together with the aforementioned sequences into the database;"

has been replaced by

--for each optimized translated binary code sequences saved into the non-volatile database, save an image of the source foreign binary code into the non-volatile database;--

(9)   In claim 33, line 5, "optimized binary translated sequence" has been replaced by

--optimized translated binary code sequence--

(10)   In claim 33, line 7, "should" has been replaced by -- if -- and in line 8, "arise" has

been replaced by -- arises--

(11)   In claim 33, line 10, "should such an image be" has been replaced by --if an image

is--

(12)   ₁ In claim 34, line 8, "should" has been replaced by -- if -- and in line 9, "arise" has

been replaced by -- arises --

(13)   In claim 34, line 15, "should such an image be" has been replaced by --if an

image is--

(14)   In claim 35,

" The binary translation system of claim 34, wherein should the search in the
association structure fail to locate any association between the foreign memory
addresses and the logical blocks, or should the search in the database fail to locate
any optimized binary translated codes associated with the source storage blocks,
the second set of logic is engaged to perform database retrieval."

has been replaced by

--The binary translation system of claim 32, further comprising a third set of logic
configured to retrieve contents from the non-volatile database if the second set of
logic becomes unable to maintain a reliable association structure for one or more
storage devices in the binary translation system or fail to locate suitable optimized
translated binary codes. --

REASON FOR ALLOWANCE

5.   The following is an examiner's statement of reason for allowance:

The cited prior art taken alone or in combination fail to teach, in combination with the

other claimed limitations, a method for performing a set of optimizing transformations on a

portion of the translated code stored in the volatile memory to generate a transformed portion of

the translated code, wherein the transformed portion includes improved execution performance

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characteristics; and storing the transformed portion in the non-volatile memory, as recited in the independent claim 28.

The cited prior art taken alone or in combination fail to teach, in combination with the other claimed limitations, a code cache configured to store a most recently used portion of a translated binary code, wherein the translated binary code corresponds to a foreign binary code compiled for use with the foreign computer system, and wherein the code cache is implemented using a portion of a volatile memory of the native computer system, the code cache being available only to the binary translation system and the translated binary code, as recited in the independent claim 29.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments of Statement of Reason for Allowance".

Conclusion

6.   The prior art made or record and not relied upon is considered pertinent to applicant's disclosure.

TITLE: Storage access authorization controls in a computer system using dynamic translation of large addresses, US 5577231 A

TITLE: Preventing garbage collection of objects in object oriented computer programming languages, US 6701520 B1

TITLE: Recording in a program execution profile references to a memory-mapped active device, US 6397379 B1

TITLE: Dynamic cross-compilation system and method, US 5768593 A.

TITLE: The Structure and Performance of Interpreters, author: Romer et al, ACM, 1996.

TITLE: CRL: High Performance All-Software Distributed Shared Memory, author: Johnson et al, ACM, 1995.

7.   Any inquiry concerning this communication or earlier communications from the

'examiner should be directed to Chameli Das whose telephone number is 703-305-1339.

The examiner can normally be reached on Monday-Friday from 7:00 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor Tuan Dam can be reached at 703-305-4552. The fax number for this group is (703)

872-9306.

An inquiry of general nature or relating to the status of this application or proceeding

should be directed to the group receptionist whose telephone number is 703-305-9600.

Chal C- Don

CHAMELI C. DAS
PRIMARY EXAMINER

7/17/04